

REMARKS

Status of the Claims:

Claims 1 – 22 are pending. New claims 21 and 22 have been added. No claims have been withdrawn from consideration.

Claim Amendments:

New claim 21 does not add new matter, because the claim is supported in the specification on page 5, lines 12 – 14. New claim 22 does not add new matter, because the claim is supported in the specification on page 3, line 34.

Unexpected Results:

“The ultimate determination of patentability must be based on consideration of the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence.”¹ “Absence of a property which a claimed invention would have been expected to possess based on the teachings of the prior art is evidence of unobviousness.”² The present invention comprises from 50 – 99.4% by weight of at least one crosslinked nonthermoplastic carrier. As expressed on page 3, lines 27 – 36 of the specification:

The crosslinked nonthermoplastic carrier acts as disintegrant which brings about rapid disintegration of the dosage form in an aqueous environment such as gastric juice. It is surprisingly possible to produce the dosage forms, which comprise a predominant proportion of a crosslinked nonthermoplastic carrier, in the absence of solvents through a process similar to melt extrusion if particular adjuvants are additionally used.

The Examples on pages 12 – 14 of the specification verify this unexpected result.

¹ MPEP §716.01(d), citing *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

² MPEP §716.02(a), citing *Ex parte Mead Johnson & Co.* 227 USPQ 78 (Bd. Pat. App. & Inter. 1985).

Allowable claims:

- I. Claims 1 – 4, 6 – 8, and 10 – 19 are allowable in view of:
- 35 U.S.C §103(a),
 - US 5,073,379 to Klimesch et al. (hereinafter, “Klimesch”), and
 - US 4,632,828 to Carli (hereinafter, “Carli”).
- II. Claim 5 is allowable in view of:
- 35 U.S.C §103(a),
 - Klimesch,
 - Carli, and
 - US 3,087,860 to Endicott et al. (hereinafter, “Endicott”).
- III. Claims 9 and 20 are allowable in view of:
- Klimesch,
 - Carli, and
 - US 4,801,460 to Goertz et al. (hereinafter, “Goertz”).

Regarding I:

Applicants respectfully submit that claims 1 – 4, 6 – 8, and 10 – 19 are allowable in view of: 35 U.S.C §103(a), Klimesch, and Carli, because “[t]he rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, **and the combination yielded nothing more than predictable results to one of ordinary skill in the art.**”³ The claimed invention is not obvious, because it yields more than predictable results. Indeed, as discussed above, the results achieved by the present invention would have been unexpected by a person of ordinary skill in the art at the time the present invention was made.

Moreover, Applicants respectfully submit that the articulated reason for

³ MPEP §2143, citing *KSR*, 550 U.S. at ___, 82 USPQ2d at 1395; *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282, 189 USPQ 449, 453 (1976); *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 62-63, 163 USPQ 673, 675 (1969); *Great Atlantic & P. Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147, 152, 87 USPQ 303, 306 (1950) (emphasis added).

combining the teachings does not support a legal conclusion of obviousness. *See KSR Int'l v. Teleflex, Inc.*, 127 S.Ct. 1727, 1741 (2007). On page 4, lines 19 – 20, the Office action of July 09, 2008, correctly asserts Klimesch does not teach a high level (50 – 99.4%) of crosslinked nonthermoplastic carrier, as required by claim 1. (Klimesch's failure to teach this feature further supports applicants' assertion that unexpected results are achieved by the present invention). The articulated reason for combining the teachings of Klimesch and Carli to arrive at this claimed feature does not support a legal conclusion of obviousness, because a person of ordinary skill in the art had no valid technical reason to use the weight ratios of the Carli system in the Klimesch system in order to achieve the advantages described in column 2, at lines 28 – 44 of Carli.

Column 2, lines 28 – 44 of Carli state:

Important advantages of systems which consist of drugs loaded in and on hydrophilic, swellable, water-insoluble polymers over "solid dispersions" and "inclusion compounds" are:

1. Greater increases of drug wettability because of the greater hydrophilicity and swelling capacity in water of the hydrophilic, swellable, water-insoluble polymers.

2. More rapid disintegration in water of the system and faster dispersion of the drug particles. Some of the hydrophilic, swellable, water-insoluble polymers which may be used in the present process are, in fact, already used and marketed as disintegrants for oral solid dosage forms.

3. Avoidance of the viscous layer around the drug which can be associated with the use of water-soluble polymers and can hinder the drug diffusion and slow down the dissolution process.

This portion of Carli does not link any advantage to the polymer to drug ratio employed. Rather, Carli compares systems, which consist of drugs loaded in and on hydrophilic, swellable, water-insoluble polymers with solid dispersions and inclusion compounds. Carli does not provide any link between the advantages described in column 2, at lines 28 – 44, and the polymer to drug ratio employed. A person of ordinary skill in the art had no

reason to expect that by arbitrarily employing the weight ratios of the Carli system in the Klimesch system the advantages of the Carli system would be achieved. Furthermore, Carli's formulation does not include adjuvants. Moreover, by using the term "consisting of," Carli explicitly rules out adjuvants. A person of ordinary skill in the art at the time the present invention was made had no apparent reason to assume that advantages associated with Carli's narrowly defined formulation would be achieved by arbitrarily implementing weight ratios, used by Carli, in other formulations that comprise components excluded from Carli's formulation. Any suggestion to the contrary would have no basis in technical reasoning.

Claim 2 requires the moldable cohesive composition to comprise 5 to 30% by weight of at least one thermoplastic polymer. Carli makes clear that it is essential that no water-soluble polymer should be present during heating of the drug and cross-linked PVP. Carli is directed to a process for loading a water-swellaable, water-insoluble polymer with methylhydroxyprogesterone acetate. At column 2, line 64, the importance of using a water-insoluble polymer is stressed. In other words, in addition to ruling out adjuvants in general, Carli rules out the thermoplastic polymer required by claim 2. Thus, a skilled artisan had no apparent reason to expect the advantages described by Carli to be obtainable according to the proposed combination, which would violate specific requirements of Carli.

A person of ordinary skill in the art had no apparent reason to arrive at a process that meets the requirements of new claim 21. Carli requires MAP and a polymer to be heated to the melting point of MAP. The melting point of MAP exceeds the maximum temperature allowed by new claim 21. A skilled artisan had no apparent reason to expect the advantages described by Carli to be obtained in a process that violates the specific requirements of Carli. Thus, no apparent reason existed to make the combination.

Finally, based on the teachings of the references, and without the benefit of the present application, a person of ordinary skill had no apparent reason to conclude that the proposed formulation would be suitable to be processed in a multi-screw extruder. The only information on record to indicate that such a formulation would be suitable to be processed in a multi-screw extruder, is found in the disclosure of the present application. Applicants respectfully submit that it would be inappropriate for Official notice to be

taken on this issue. MPEP §2144.03 states, “Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known.”

As discussed above, “[e]vidence of unexpected results must be weighed against evidence supporting *prima facie* obviousness in making a final determination of the obviousness of the claimed invention.”⁴ However, applicants respectfully submit that the cited references do not provide sufficient evidence to establish a *prima facie* case of obviousness with respect to the allowable claims. In addition to the discussion above regarding the Office action’s articulated rationale, applicants respectfully submit that the references provide no apparent reason for a person of ordinary skill in the art at the time the present invention was made to assume that the proposed formulation would be suitable to be processed in a multi-screw extruder. According to the claims of the present invention, a multi-screw extruder is used for forming a moldable, cohesive composition. The Carli heat-treated MAP crosslinked PVP system is sieved (cf. Example 5 of Carli). A cohesive mixture cannot be sieved. A person of ordinary skill in the art had no apparent reason to consider the Carli system to be suitable to be processed in a multi-screw extruder, and, therefore, Carli does not provide any apparent reason for a skilled artisan to conclude that the formulation according to the proposed combination would be suitable to be processed in a multi-screw extruder. Since neither Carli nor Klimesh provide a person of ordinary skill with a reason to conclude that the proposed formulation would be suitable to be processed in a multi-screw extruder, the combination of Carli and Klimesh cannot establish a *prima facie* case of obviousness.

Regarding II:

Applicants respectfully submit that claim 5 is allowable in view of 35 U.S.C §103(a), Klimesch, Carli, and Endicott, because, as discussed above, the claimed invention yields more than predictable results. Moreover, Applicants respectfully submit that the articulated reason for combining the teachings does not support a legal conclusion of obviousness. *See KSR Int’l v. Teleflex, Inc.*, 127 S.Ct. 1727, 1741 (2007).

⁴ MPEP §716.02(c), citing *In re May*, 574 F.2d 1082, 197 USPQ 601 (CCPA 1978).

Endicott is not cited to compensate for the shortcomings of Klimesch and Carli, already discussed.

Regarding III:

Applicants respectfully submit that claims 9 and 20 are allowable in view of 35 U.S.C. §103(a), Klimesch, Carli, and Goertz, because, as discussed above, the claimed invention yields more than predictable results. Moreover, Applicants respectfully submit that the articulated reason for combining the teachings does not support a legal conclusion of obviousness. *See KSR Int'l v. Teleflex, Inc.*, 127 S.Ct. 1727, 1741 (2007). Goertz is not cited to compensate for the shortcomings of Klimesch and Carli, already discussed.

Fee Authorization

Please charge any shortage in fees due in connection with the filing of this paper, including any shortage in Extension of Time fees, to Deposit Account 14.1437. Please credit any excess fees to such account.

Conclusion

The present application is in condition for allowance, and applicants respectfully request favorable action. In order to facilitate the resolution of any questions, the Examiner is welcome to contact the undersigned by phone.

NOVAK DRUCE + QUIGG, LLP
1300 Eye St. N.W.
Suite 1000 West
Washington, D.C. 20005

Phone: (202) 659-0100
Fax: (202) 659-0105

Respectfully submitted,
NOVAK DRUCE + QUIGG, LLP



Michael P. Byrne
Registration No. 54,015